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ABSTRACT

This study evaluated whether alcoholics who receive relapse prevention (RP) sessions in the year after a short-term behavioral marital therapy (BMT) do better at long-term follow-up than do those not receiving the additional RP. Sixty couples with an alcoholic husband, after participating in 10 weekly BMT couples group sessions, were assigned randomly to receive or not receive 15 additional conjoint couples RP sessions over the next 12 months. A multidimensional battery of marital, sexual, drinking, and related outcome measures was collected before and after the BMT group and at quarterly intervals for 2.5 years after the BMT group. This provided ongoing assessment during the 12 months when one-half of the couples were getting RP sessions and 18 months follow-up data after the RP sessions ended. Results from 12-month follow-up data for one-half of the sample showed that significant improvements in male alcoholics' marital and drinking outcomes occurred from before to after the BMT couples groups. Alcoholics who received RP after BMT maintained their improved marriages better, used behaviors targeted by BMT more, and showed a trend toward less drinking. Further, alcoholics with more severe alcohol and marital problems, who did not receive RP, deteriorated at a faster rate in the months after BMT ended than did their counterparts who did receive RP. (Author/NB)

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Couples Relapse Prevention Sessions as a Maintenance Strategy for Alcoholics*

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Couples Relapse Prevention Sessions as a Maintenance Strategy for Alcoholics

Abstract

This study evaluated whether alcoholics who receive relapse prevention (RP) sessions in the year after a short-term behavioral marital therapy (BMT) couples do better at long-term follow-up than do those not receiving the additional RP. In this study sixty couples with an alcoholic husband, after participating in 10 weekly two-hour BMT couples group sessions, were assigned randomly to receive or not receive 15 additional conjoint couples relapse prevention (RP) sessions over the next 12 months. A multidimensional battery of marital, sexual, drinking and related outcome measures was collected before and after the BMT group and at quarterly intervals for 2 1/2 years after the BMT group. This provided ongoing assessment during the 12 months when half the couples were getting RP sessions and 18 months follow-up data after the RP sessions end. Currently 12 month follow-up results are available for half the sample. These results show that significant improvements in male alcoholics' marital and drinking outcomes occurred from before to after BMT couples groups thus replicating results of our own and other's earlier studies of BMT with alcoholics. Alcoholics who received RP after BMT group maintained their improved marriages better, used behaviors targeted by BMT more, and showed a trend toward less drinking. Further, alcoholics with more severe alcohol and marital problems (as indicated by a history of greater verbal and physical aggression by the alcoholic toward the wife) who did not receive RP deteriorated at a faster rate as the months after BMT went by than did their counterparts who did receive RP.

Couples Relapse Prevention Sessions

as a Maintenance Strategy for Alcoholics

Fifteen years ago the Second Special Report to the U.S. Congress on Alcohol and Health (Keller, 1974) called marital and family treatment approaches "one of the most outstanding current advances in the area of psychotherapy of alcoholism" (p.116) and called for controlled outcome studies to evaluate this promising treatment method. The past 15 years have produced considerable progress in research on the effectiveness of marital and family therapy (MFT) to initiate, stabilize and maintain recovery from alcoholism. Recent reviews of this literature (O'Farrell, 1988, 1989; O'Farrell & Cowles, 1989) have reached three general conclusions.

First, controlled studies (Sisson & Agrin, 1986; Thomas, Santa et al. 1987), as well as current clinical practice (Johnson, 1973) and earlier less controlled research (Cohen & Krause, 1971), suggest that intervening at the marital/family level with nonalcoholic family members can motivate an initial commitment to change in the alcoholic who is otherwise reluctant to seek help.

Second, evidence is accumulating that MFT helps stabilize marital and family relationships and supports improvements in alcoholics' drinking during the six to twelve month period following treatment entry for alcoholism. MFT alone or in addition to individual alcoholism treatment produces better marital and/or drinking outcomes during this time period than methods that don't involve the spouse or other family members. The most promising MFT approach is behavioral marital therapy (BMT) that combines both a focus on the drinking plus work on more general marital relationship issues via direct instigation of positive couple and family activities and teaching of com-

munication and conflict resolution skills (e.g., McCrady, Noel, Abrams, Stout, Nelson & Hay, 1986; O'Farrell & Cutter, 1982; O'Farrell, Cutter & Floyd, 1985).

Third, research is just starting to focus on the effects of marital and family therapy in maintaining long term recovery from alcoholism. Only the O'Farrell et al. (1982, 1985) study has provided long-term outcome data which shows that BMT results fade over time with the superiority of drinking outcomes diminishing sooner that the superiority of the marital outcomes. These results suggest a need for more attention to maintenance of gains produced by BMT, especially for drinking and related behaviors. Furthermore, in the O'Farrell et al. study, events in the marriage were the reasons most frequently cited by the alcoholics as the cause of relapse (Maisto, O'Farrell et al., 1988). Interestingly enough, factors involving the spouses were also very frequently given as reasons for ending the relapse episode.

Insert Figure 1 about here

The available literature and the PI's own findings suggested a new study that combined two of the most exciting areas of alcoholism treatment outcome research — marital therapy and relapse prevention (Marlett & Gordon, 1985) --to evaluate couples relapse prevention sessions. An on-going study is testing three predictions about the relative efficacy of behavioral marital therapy with and without relapse prevention sessions.

The first prediction is that male alcoholics who receive couples relapse prevention sessions in the year after a short-term BMT couples group do better during a two and one half year follow-up period than couples who do <u>not</u>

receive the additional relapse prevention sessions. Figure 1 depicts this design. The present paper evaluates this prediction during the first year after the end of the BMT couples group.

Secondly, the study tests (and the present paper presents one year follow-up results to examine) the predictions that (a) couples who receive the additional relapse prevention sessions, when compared with those who do not, will show greater use of the behaviors targeted by the BMT group during the year after the BMT group and (b) greater use of the behaviors targeted by the BMT group will be associated with better marital and drinking outcomes.

Insert Figure 2 about here.

Third, this study also examines the prediction that couples with more severe alcohol and marital problems at study entry and a pattern of marital conflict often preceding drinking are (a) likely to have worse outcomes overall and (b) be the couples for whom the additional relapse prevention (RP) sessions improve outcomes. Figure 2 illustrates the type of patient characteristic by treatment type interaction that is predicted. The present paper evaluates this patient by treatment interaction prediction for outcomes during the first year after the end of the BMT couples group.

Method

Overview

Sixty couples with a newly abstinent alcoholic husband, after participating in 10 weekly two-hour BMT couples group sessions, were assigned randomly to receive or not to receive 15 additional conjoint couples relapse prevention (RP) sessions over the next 12 months. A multidimensional battery

of marital and drinking outcome measures was collected before and after the BMT group and at quarterly intervals for 2 1/2 years after the end of the BMT group. This provided ongoing assessment during the 12 months when half the couples were getting RP sessions and 18 months follow-up data after the RP sessions ended. Figure 1 depicts this design. In addition, other measures thought possible to predict outcome and/or interact with treatment condition were collected at study entry.

Subjects

Sixty couples with an alcoholic husband who entered the Counseling for Alcoholics' marriages (CALM) Project at the VA Medical Center in Brockton and West Roxbury, Massachusetts, were Ss. Inclusion criteria were: (1) age 25 to 60; (b) married at least 1 year or living together in a stable common-law relationship for at least 3 years; (c) husband met DSM-III-R criteria for alcohol abuse or alcohol dependence; (d) Michigan Alcoholism Screening Test (MAST); Selzer, 1971) score $\geq$ 7; (e) alcoholic had consumed alcohol in the 120 days prior to initial assessment, (f) alcoholic accepted abstinence at least for the duration of the BMT couples group. Exclusion criteria were: (a) wife also abused alcohol and had been abstinent less than six months; (b) either spouse met DSM-III criteria for psychoactive substance use disorder (other than alcoholism) in past six months; (c) either spouse met DSM-III criteria for the following disorders — schizophrenia, delusional (paranoid) disorder, bipolar disorder, major depression, other psychotic disorders or borderline personality disorder; and (d) couple separated and unwilling to reconcile for the project.

Procedure

Pre-and Posttreatment Assessments. After a screening interview and

signing a consent form, each couple was seen together for two to three pre-treatment assessment sessions during which drinking history interviews, self-report questionnaires on marital and sexual adjustment, and videotaped samples of couples' marriage problem discussions were obtained. After the BMT couples group, a posttreatment assessment session was conducted to obtain the dependent measures.

BMT Couples Group. This treatment package has been described in detail elsewhere (O'Farrell & Cutter, 1984). Briefly, couples participate in 10 weekly two-hour BMT couples group sessions in which weekly homework assignments and behavioral rehearsal are used to help couples (a) decrease drinking and alcohol-related interactions by making an Antabuse Contract (O'Farrell & Bayog, 1986); (b) plan shared recreational activities; (c) notice, acknowledge, and initiate daily caring behaviors; (d)_ learn communications skills of listening, expressing feelings directly, and the use of planned communication sessions; and (e) negotiate desired changes using positive specific requests, compromise, and written agreements. The BMT groups were conducted by male-female co-therapy teams whose training consisted of reading, reviewing videotapes and audiotapes of prior BMT groups, roleplaying of therapy techniques,and co-leading at least one group with the first author as co-therapist or group observer. Once trained the therapist became the senior therapist with another co-therapist. Weekly supervisory meetings of therapists with the first author, a detailed session-by-session treatment manual (O'Farrell, 1980), and rating by a research assistant of tapes of sessions on the appropriateness of the procedures being used insured that treatments were delivered as planned.

Random Assignment. Each BMT group consisted of four couples. They were

divided into two pairs that most closely resembled each other on age, education, years problem drinking, MAT score, % abstinent and % separated days in year prior to BMT group, and whether or not the alcoholic was employed at study entry. Random assignment to RP or control was then done within each matched pair.

Couples Relapse Prevention (RP) Sessions. Couples in the BMT plus RP condition received fifteen 50-75 minute RP sessions spaced at gradually increasing intersession intervals over the 12 months after the end of the BMT group. RP sessions were conducted conjointly with one couple at a time by one of the therapists who had led the couple's BMT group. The RP sessions had three major components. The first was to help the couple maintain the marital and drinking gains achieved in the BMT group. The second was to use the skills learned in the BMT group to deal with marital and other issues still unresolved or that emerged after the couples group. The third was to develop and cognitively and behaviorally rehearse a Relapse Prevention Plan. The RP Plan included identifying high risk situations and early warning signs for relapse and planning how to deal with any drinking that might occur in a way likely to minimize the length and consequences of the drinking (Marlatt & Gordon, 1985). A treatment manual was used for the RP sessions which built on the skills learned in the BMT group and allowed the therapist to individualize these sessions to the needs of each couple.

Post BMT Couples Group Follow-up Data Collections. Couples were contacted for follow-up data collection every 90 days for the 2 1/2 years after the end of the BMT couples group. Drinking interview data were collected quarterly and marital questionnaire data were collected at 3, 6, 12, 18, 24, and 30-month follow-up contacts. This provided outcome data during

the first year after the BMT group while some couples were getting RP and for 18 months after the RP sessions ended.

Measures

Marital outcome measures. The Marital Adjustment Test (MAT, Locke & Wallace, 1959), a widely used measure with established reliability and validity was used to assess overall marital satisfaction.

Drinking outcome measures. Drinking behavior was measured with the Time-Line (TL) Drinking Behavior Interview. Reliability and validity data for the TL have been presented elsewhere (O'Farrell & Langenbucher, 1988; O'Farrell et al., 1984, Sobell et al., 1979). Recent reviews (Babor, Stephens & Marlatt, 1987; O'Farrell & Maisto, 1987) have recommended the TL for use in alcoholism treatment outcome studies. The TL was used to gather retrospective information on drinking for the 12 months prior to study entry and for each 90-day assessment period after the BMT group. The TL provided measures of daily drinking disposition in which each day of the time interval of interest was coded according to the amount of alcohol consumed on that day (no alcohol, $\leq$ 3 ounces of alcohol, or > 3 ounces of alcohol) and whether the day was spent incarcerated in jail or a hospital for alcohol-related reasons. The percent days not alcohol-involved (i.e., neither drinking or incarcerated) and the percent days drinking heavily (i.e., > 3 ounces alcohol) or in jail or hospital for each time period are the two drinking outcome measures presented in this paper. The second variable was labeled percent days relapsed.

A convergent validity approach (Sobell & Sobell, 1980), consisting of alcoholic and spouse reports was used to establish confidence in the accuracy of the self-reported drinking data. Specifically, husband and wife were interviewed separately and the alcoholic was given a breath test to insure his

sobriety when interviewed (Sobell & Sobell, 1975; Sobell et al., 1979). After their separate interviews, any discrepancies between the reports of the husband and wife were brought to the attention of the spouses in a joint meeting. These discrepancies were then reconciled to the satisfaction of both spouses and the interviewer to provide a combined, more accurate "reconciled report" that was used for the drinking outcome measures.

Treatment-Targeted Behavior. Compliance with treatment targeted behaviors after the BMT group was measured at each follow-up assessment by the Couples Behaviors Questionnaire (O'Farrell, 1980) which measures the extent of participation during the previous 90 days in behaviors targeted by the BMT couple group. Four scales of the Couples Behavior Questionnaire assess the degree to which the respondent engaged in the Antabuse Contract, Positive Activities together with spouse and family, Communication SKills taught in the BMT group, and Negotiating Agreements.

Measures Predictive of Outcome. Severity of the alcoholism problem at study entry was measured by: (a) total score on the Michigan Alcoholism Screening Test (MAST) (Selzer, 1971) which measures recognition and negative consequences of and help-seeking for alcohol problems; (b) total score on the Alcohol Dependence Scale (ADS; Skinner & Allen, 1982), which provides a continuous measure of the extent and severity of the alcoholics' physical and psychological dependence on alcohol; and lifetime total number of alcohol-related (c) hospitalizations, (d) arrests and (e) job losses.
Severity of the marital problems was assessed by study entry scores on the marital Adjustment Test, days separated in prior year, the Marital Status inventory (MSI) (Weiss & Cerretto, 1980) which measures closeness to divorce, and by the Verbal Aggression and Violence Scores from the Conflict Tactics

Scale (Straus, 1979). The extent to which marital problems precede drinking and vice versa was measured with two scales from the Alcohol Use Inventory (Wanberg et al, 1977) "Marital problems precede drinking" (scale 15) and "Drinking proceeds marital problems" (scale 16).

Insert Table 1 about here

Results

This paper presents results for 29 of the 60 couples (13 in BMT plus relapse prevention and 16 in BMT only) who have completed 12 month follow-up data collection at this time. The two groups of couples did not differ on the characteristics shown in Table 1. The unequal n's resulted from dropouts from the relapse prevention (RP) condition. These dropouts have been replaced but sufficiently long follow-up data are not yet available to include them and the rest of the sample in this report.

BMT plus RP versus BMT Only Compared on Marital and Drinking Outcomes

This paper compares BMT only with BMT plus RP on (1) Marital Adjustment Test (MAT) scores, (b) percent days not-alcohol-involved (abstinent and not in jail or hospital for alcohol-related reasons), (c) percent days relapsed (heavy drinking or in jail or hospital for alcohol-related reasons), and (d) use of behaviors targeted by the BMT couples group. Data collection contracts occurred before (Pre) and immediately (Post), 3 months, 6 months, 9 months and 12 months after the BMT group. Drinking data was collected at each contact and the Marital Adjustment test was collected at all but the 9-month follow-up.

A series of 2 x 2 x 4 (Treatment by Gender by Time) analysis of covariance (ANCOVA) with repeated measures on the last two dimensions were employed

to evaluate the effect of the Treatments (BMT only versus BMT plus RP) on the measures of marital adjustment and use of BMT targeted behaviors. The first repeated measures dimension corresponds to sex of spouses (i.e., husband and wife). The second corresponds to the four follow-up periods at Post 3,6, and 12 months after BMT group. Pretreatment scores on dependent measures were covaried to account for stable individual differences and reduce error. For the % days not alcohol involved and % relapse days measures, the design was collapsed to a 2 x 4 ANOVA because separate scores for husband and wife were not used for these measures. In addition, matched t-tests comparing pre with each follow-up assessment for each measure were conducted to determine whether subjects in each condition showed significant improvement from pre to that follow-up period.

Insert Table 2 and Figure 3 about here.

Marital Adjustment Test. The pretreatment MAT scores of both the husbands and wives were used as covariates. In this analysis and for each of the following ANCOVAs, the interaction of the covariates with the treatment was initially tested to ensure that the assumptions underlying the ANCOVAs were not violated (e.g., Keppel, 1973, p. 484). In no case was this interaction found to be significant. Both the pretests for the husbands and wives were significant covariates [$F(1,25) = 18.93$, $p < .001$; $F(1,25) = 24.38$, $p < .001$] respectively.

Results for the ANCOVA showed a significant effect for Treatment (and other effects, n.s.) with RP plus BMT couples better than BMT only couples over all follow-up periods [$F(1,25) = 4.22$, $p = .05$]. Although ANCOVAs

conducted separately at each follow-up period failed to find a significant Treatment effect at any follow-up, the RP couples approached better marital adjustment than BMT only couples at 12 month follow-up [$F(1,25) = 3,514$, $p = .073$]. Further results from t-tests comparing pretest MAT score with each follow-up MAT score showed significantly improved marital adjustment from pre to post BMT group for both treatment conditions but that only RP couples remained significantly improved at 3,5, and 12 months follow-up. The first two rows of Table 2 and Figure 3 present the results for the Marital Adjustment Test.

Insert Figure 4 about here.

Percent days not alcohol-involved. A Treatment by Trials ANCOVA was again run using the pretest as the covariate and the percent days not alcohol involved (abstinent and not jailed or hospitalized for alcohol-related reasons) as the dependent variable. The pretest did not reach significance as a covariate ($F < 1$). The Trials effect only was significant [$F(3,78) = 4.22$, $p = .008$]. Although one way ANCOVAs run at each of four follow-up periods did not yield any significant group differences, the relapse prevention group approached significantly less drinking than the BMT only control group at 12 month follow-up [$F1,26) = 3.867$, $p = 060$]. The pre-test was not significant as a covariate in any of the four oneway ANCOVAs. Using t tests to compare the percent days not alcohol involved in the year before treatment with each follow-up period, significantly fewer ($p < .001$) alcohol involved days occurred at each follow-up period for both the relapse prevention and the control group. The third and fourth rows of Table 2 and Figure 4 present

these results for percent days not alcohol-involved.

Insert Figure 5 about here.

Percent relapsed days. A Treatment by Trials ANCOVA with pretest as the covariate was run using the percent of relapsed days within each follow-up period as the dependent variable. Relapse days were defined as days on which seven or more standard drinks were consumed or the subject was incarcerated in either a hospital or jail due to use of alcohol. The pre-test was a nonsignificant covariate and the ANCOVA did not produce any significant results. Comparison of the pretest with each follow-up period using paired t-tests indicated significantly less drinking at each follow-up ($p \leq .001$) for both the relapse prevention and control subjects. The fifth and sixth rows of Table 2 and Figure 5 present these results for percent relapsed days.

Insert Figure 6 about here.

Use of behaviors targeted by BMT-group. Behaviors targeted by the BMT group were a behavioral contract between alcoholic and spouse to maintain Antabuse ingestion, positive couple and family activities, and use of communication and negotiation skills. Analyses of the extent of use of the Antabuse Contract have been completed. Results for the Antabuse Contract showed significant effects occurred for Treatment [$F(1,20) = 7.69$, $p = .012$], Trials [$F(2,40) = 18.55$, $p < .001$], and the Treatment by Trials interaction [$F(2,40) = 6.56$, $p = .003$]. The effect for gender approached significance [$F(1,20) = 4.08$, $p = .057$]. Thus, a Treatment by Gender ANCOVA was run at

each time period to determine when the differences emerged. No effect was significant at post-test which indicated that use of the Antabuse Contract was similar during the BMT group for subjects in both treatment conditions as expected. Furthermore, as predicted, the BMT plus relapse prevention subjects reported greater use of the Antabuse Contract than those given BMT alone at six months [$F(1,22) = 12.06$, $p = .002$] and 12 month follow-up [$F(1,21) = 36.76$, $p = .009$]. The last two rows of Table 2 and Figure 6 present these results for use of the Antabuse Contract.

Patient Characteristic by Treatment Type Analyses

We predicted that couples with more severe alcohol and marital problems would show the greatest additional benefit from receiving RP in addition to BMT. The alcoholics' verbal and physical aggression toward wife in the year prior to study entry [measured by the total score on the Conflict Tactics Scale (Straus, 1979)] was the first marital problem severity measure analyzed. A Treatment (BMT only vs. BMT plus RP) by Aggression by Time Period (post, 3-,6-, 12-month follow-up) ANCOVA with the pretest score as covariate was conducted using percent days relapsed as the dependent variable. Aggression was entered in the ANCOVA as a continuous independent variable (Pedhazur, 1982). Results of this ANCOVA revealed the following significant effects: Treatment [$F(1,24) = 4.37$, $p = .047$], Aggression [$F(1,24) = 11.88$, $p = .002$], Time [$F(3,72) = 5.53$, $p = .002$], and interactions of Treatment by Aggression $F(1,24) = 13.77$, $p = .001$], Treatment by Time [$F(3,72) = 2.59$, $p = .060$], Aggression by Time [$F(3,72) = 2.90$, $p = 0.41$].

Insert Figure 7 about here

The Treatment by Aggression and Treatment by Time interactions were followed with a Treatment by Aggression ANCOVA at each time period. Treatment was significantly related to percent days relapsed at six months [$F(1,25) = 7.08$, $p = .013$] and 12 months follow-up [$F(1,24) = 5.90$, $p = .023$], with BMT only subjects experiencing more days relapsed than subjects who received the additional RP sessions. At each time period, Aggression was significant as was the Treatment by Aggression interaction. A regression with Aggression as the independent variable was therefore run for each treatment at each time period. Figure 7 displays the results of these regression analyses. For the group given relapse prevention sessions, no significant relationship emerged. The group not given relapse prevention showed a significant positive relationship to Aggression at each time period. These results mean that during each follow-up period in the year after BMT, the amount of aggression exhibited by the husband prior to treatment was positively associated with the percent of days relapsed for those couples treated with BMT alone. For those couples given additional relapse prevention training, this apparent vulnerability to relapse associated with pretreatment aggression was eradicated.

Insert Figure 8 about here

To summarize the different degree of relapse for each group across follow-up periods, a trend analysis was run that revealed a significant linear trend [$F(6,22) = 2.87$, $p = .032$]. A composite score of percent days relapsed at each time period weighted by the respective linear trend score was summed into a single variable reflecting the linear trend in percent days relapsed over the 12 month follow-up period. The regression lines and data points are

presented in Figure 8 for each group, predicting the linear trend associated with percent days relapsed from the husbands' aggression. These analyses of linear trend over the entire year after BMT group showed that the alcoholics with a history of greater verbal and physical aggression toward their wives did not receive RP deteriorated (i.e., increased the amount of time drinking heavily or in jail or hospital for drinking) at a faster rate as the months after BMT went by that did their counterparts who received RP.

Discussion

The present study showed that significant improvements in male alcoholics' marital and drinking outcomes occurred from before to after BMT couples group thus replicating our earlier results (O'Farrell et al., 1985) and the results of other studies of BMT with alcoholics (Azrin et al., 1982; Hedberg & Campbell, 1974; McCrady et al., 1986; Sisson & Azrin, 1986). The most important results concern the test of predictions that relapse prevention sessions would maintain the gains produced by the BMT group.

The prediction that alcoholics who received the RP sessions in addition to BMT would do better on marital and drinking outcomes than those who received only BMT received support. In the year after BMT group, RP couples showed better marital adjustment than BMT only couples. Although subjects in both treatment conditions showed significantly improved marital adjustment from before to after BMT group, only subjects who received the additional RP remained significantly improved on marital adjustment at 3, 6, and 12 months follow-up. Support for results on drinking outcomes was less strong in that RP showed only a trend toward significantly better drinking outcomes than BMT-only subjects during months 7 to 12 after BMT group. Greater variability in drinking outcomes in the BMT-only cases also was noted.

The prediction that RP subjects would show greater use of behaviors targeted by the BMT group in the year after the group also was supported. Greater use was made of the Antabuse Contract in the year after the BMT group by those who received the additional RP than by those who did not.

Finally, some preliminary support was found for the prediction that couples with more severe alcohol and marital problems will be the couples for whom the RP sessions improve outcomes by preventing or reducing clinical deterioration over time after BMT group. Specifically, alcoholics who exhibited more verbal and physical aggression toward their wives in the year prior to treatment had more days relapsed in the months after BMT group if they did not receive the additional RP sessions, while couples given the additional RP did not experience greater vulnerability to relapse as a function of greater pretreatment aggression. Furthermore, trend analyses showed that alcoholics with more a history of greater verbal and physical aggression toward their wives who did not receive RP deteriorated at a faster rate as the months after BMT went by than did their counterparts who did receive RP.

References

Azrin, N. H., Sisson, R. W., Myers, R., & Godley, M. (1982). Alcoholism treatment by Disulfiram and community reinforcement therapy. Journal of Behavior Therapy and Experimental Psychiatry, 13, 105-112.

Cohen, D. C., & Krause, M. S. (1971). Casework with the wives of alcoholics. New York: Family Service Association of America.

Hedberg, A. G. & Campbell, L. (1974). A comparison of four behavioral treatments of alcoholism. Journal of Behavior Therapy and Experimental Psychiatry 5, 251-256.

Johnson, V. A. (1973). I'll quit tomorrow. New York: Harper and Row.

Keller, J. (Ed.) (1974). Trends in treatment of alcoholism. In Second special report to the U.S. Congress on alcohol and health. (pp. 145-167). Washington, DC: Department of Health, Education and Welfare.

Keppel, G. (1973). Design and analysis: A researcher's handbook. Englewood Cliffs, NJ: Prentice-Hall.

Locke, H. J. & Wallace, K. M. (1959). Short marital-adjustment and prediction tests: Their reliability and validity. Journal of Marriage and Family Living, 21, 251-255.

Maisto, S. A., O'Farrell, T. J., Connors, G. J., McKay, J., Pelcovitz, M. A. (1988). Alcoholics' attributions of factors affecting their relapse to drinking and reasons for terminating relapse events. Addictive Behaviors, 13, 79-82.

Marlatt, G. A., & Gordon, J. R. (Ed.) (1985). Relapse prevention: Maintenance strategies in the treatment of addictive behaviors. New York: Guilford.

McCrady, B. S., Noel, N. E., Abrams, D. B., Stout, R. L., Nelson, H. F. (1986). Comparative effectiveness of three types of spouse involvement

in outpatient behavioral alcoholism treatment. Journal of Studies on Alcohol, 47, 459-467.

O'Farrell, T. J. (1989). Marital and family therapy in alcoholism treatment. Journal of Substance Abuse Treatment, 6, 23-29.

O'Farrell, T. J. (January, 1988). Marital and family therapy in alcoholism treatment. Report prepared for the National Academy of Sciences Institute of Medicine Committee on Treatment of Alcohol Problems. (Available from author at Alcohol and Family Studies Laboratory, VA Medical Center (116B) and Harvard Medical School, 940 Belmont Street, Brockton, MA).

O'Farrell, T. J. (1980). Couple Behaviors Questionnaire. Unpublished questionnaire. Alcohol and Family Studies Laboratory, VA Medical Center and Harvard Medical School, Brockton and West Roxbury, Massachusetts.

O'Farrell, T. J., & Bayog, R. D. (1986). Antabuse contracts for married alcoholics and their spouses: A method to insure Antabuse taking and decrease conflict about alcohol. Journal of Substance Abuse Treatment, 3, 1-8.

O'Farrell, T. J. & Cowles, K. (1989). Marital and family therapy. In R. Hester & W. R. Miller (Eds.), Comprehensive handbook of alcoholism treatment approaches (pp. 183-205). New York: Pergamon Press.

O'Farrell, T. J. & Cutter, H. S. G. (1982, November). Effect of adding a behavioral or an interactional couples group to individual outpatient alcoholism counseling. In T. J. O'Farrell (Chair), Spouse-involved treatment for alcohol abuse. Symposium conducted at the Sixteenth Annual Convention of the Association for the Advancement of Behavior Therapy, Los Angeles.

O'Farrell, T. J. & Cutter, H. S. G. (1984). Behavioral marital therapy couples groups for male alcoholics and their wives. Journal of Substance Abuse Treatment, 1, 191-204.

O'Farrell, T. J., & Langenbucher, J. (1988). Time-line drinking behavior interview. In: Hersen, M. & Bellack, A. (Eds.) Dictionary of behavioral assessment techniques (pp. 477-479. New York: Pergamon Press.

O'Farrell, T. J. & Maisto, S. A. (1987). The utility of self-report and biological measures of alcohol consumption in alcoholism treatment outcome studies. Advances in Behavior Research and Therapy, 9, 91-125.

O'Farrell, T. J., Cutter, H. S. G., & Floyd, F. J. (1985). Evaluating behavioral marital therapy for male alcoholics: Effects on marital adjustment and communication from before to after therapy. Behavior Therapy, 16, 147-167.

O'Farrell, T. J., Cutter, H. S. G., Bayog, R. D., Dentch, G., & Fortgang, J. (1984). Correspondence between one-year retrospective reports of pre-treatment drinking by alcoholics and their wives. Behavioral Assessment, 6, 263-274.

Pedhazur, E. J. (1982). Multiple regression in behavioral research: Explanation and prediction (2nd ed.). New York: Holt, Rinehart and Winston.

Selzer, M. L. (1971). The Michigan Alcoholism Screening Test: The quest for a new diagnostic instrument. American Journal of Psychiatry, 127, 1653-1658.

Sisson, R. W. & Azrin, N. H. (1986). Family-member involvement to initiate and promote treatment of problem drinkers. Journal of Behavior Therapy

and Experimental Psychiatry, 17, 15-21.

Skinner, H. A. & Allen, B. A. (1982). Alcohol dependence syndrome: Measurement and validation. Journal of Abnormal Psychology, 91, 199-209.

Sobell, M. B. & Sobell, L. C. (1975). A brief technical report on the MOBAT: An inexpensive portable test for determining blood alcohol concentration. Journal of Applied Behavior Analysis, 8, 117-120.

Sobell, L. C., & Sobell, M. B. (1980). Convergent validity: An approach to increasing confidence in treatment outcome conclusions with alcohol and drug abusers. In L. C. Sobell, M. B. Sobell, & E. Ward (Eds.), Evaluating alcohol and drug abuse treatment effectiveness. New York: Pergamon.

Sobell, L. C., Maisto, S. A., Sobell, M. B., & Cooper, A. M. (1979). Reliability of alcohol abusers' self-reports of drinking behavior. Behavior Research and Therapy, 17, 157-160.

Straus, M. D. (1979). Measuring intra-family conflict and violence: The Conflict Tactic (CT) Scales. Journal of Marriage and the Family, 41, 75-88.

Thomas, E. J., Santa, C. A., Bronson, D., & Oyserman, D. (1987). Unilateral family therapy with spouses of alcoholics. Journal of Social Service Research, 10, 154-163.

Wanberg, K. W., Horn, J. L., & Foster, F. M. (1977). A differential assessment model of alcoholism: The scales of the Alcohol Use Inventory. Journal of Studies on Alcohol, 38, 512-543.

Weiss, R. L., & Cerreto, M. C. (1980). The Marital Status Inventory: Development of a measure of dissolution potential. American Journal of Family Therapy, 8, 80-85.

Table 1

Pretreatment Characteristics of Alcoholics and Wives for the Entire Sample and for each Treatment Condition

Characteristic	Entire Sample	BMT only	BMT plus RP
N of couples	29	16	13
Husbands' Age			
M	43.90	42.69	45.38
SD	8.16	7.91	8.53
Range	28-56	32-56	28-56
Wives' Age			
M	40.93	39.00	43.31
SD	9.07	8.16	9.89
Range	27-63	27-54	27-63
Husbands' Years of Education			
M	12.14	12.00	12.31
SD	1.51	1.41	1.65
Range	9-16	9-14	9-16
Wives' Years of Education			
M	12.93	13.50	12.23
SD	1.58	1.41	1.54
Range	8-16	12-16	8-14
Years Married			
M	13.34	11.25	15.92
SD	8.40	9.07	6.99
Range	1-28	1-28	6-26
Number of Children			
M	2.77	2.50	2.92
SD	2.20	1.55	2.29
Range	0-11	0-7	1-9
Percent of alcoholics employed	89.65%	81.3%	100%
Years Drinking a Problem			
M	14.72	14.38	15.15
SD	11.08	10.22	12.48
Range	2-41	3-33	2-41
Michigan Alcoholism Screening Test			
M	38.21	36.50	40.31
SD	11.56	13.15	9.31
Range	11-53	11-51	23-53
Alcohol Dependence Scale			
M	22.34	20.31	24.85
SD	11.38	13.60	7.65
Range	2-44	2-44	9-38

Table 1 (continued)

Characteristic	Entire Sample	BMT only	BMT plus RP
Withdrawal Symptoms[a]			
Severe	20.69%	18.8%	23.1%
Moderate	68.96%	68.8%	69.2%
None	10.34%	12.5%	7.7%
Previous Alcohol-Related Hospitalizations			
M	8.34	9.94	6.38
SD	12.61	16.34	5.47
Range	0-53	0-53	1-20
Prior alcohol-related arrests			
M	3.17	2.13	4.46
SD	4.78	2.94	6.27
Range	0-24	0-10	0-24
Prior alcohol-related job losses			
M	0.61	1.00	0.15
SD	1.47	1.93	0.38
Range	0-7	0-7	0-1
Marital Adjustment Test			
M	88.84	91.59	85.46
SD	25.98	29.77	21.07
Range	18-136	18-136	63-130
Marital Status Inventory			
M	2.17	2.19	2.15
SD	2.17	2.46	1.86
Range	0-8	0-8	0-7
Percent days separated prior year			
M	4.28	7.38	0.46
SD	13.38	17.62	1.11
Range	0-63	0-63	0-4

[a]Delerium tremens, seizures and convulsions were considered severe withdrawal symptoms. Halucinations, tremors, and blackouts were the moderately severe symptoms.

Table 2

Outcomes on Marital Adjustment and Drinking and Use of Antabuse Contract for Alcoholics and Their Wives Who Received BMT Couples Group Only and for Those Who Received BMT Couples Group Plus Relapse Prevention

	Pre	Post	Pre-Post t^a	3mo Fup	Pre-3Fup t^a	6mo Fup	Pre-6mo t^a	12mo Fup	Pre-12mo t^a
				Marital Adjustment Test[b]					
BMT plus RP									
M (SD)	85.46 (21.07)	103.58 (18.50)	-4.91***	104.19 (17.41)	-4.46***	107.58 (20.39)	-5.06***	106.42 (15.15)	-6.54***
BMT Only									
M (SD)	91.59 (29.77)	107.37 (28.30)	-6.02***	99.56 (37.07)	-1.90	100.97 (38.08)	-1.48	96.97 (36.18)	-0.82
				Per Cent Days Not Alcohol-Involved					
BMT plus RP									
M (SD)	32.83 (26.08)	97.99 (6.55)	-8.41***	97.13 (8.77)	-8.08***	92.39 (13.78)	-7.22***	93.48 (10.19)	-8.51***
BMT Only									
M (SD)	31.27 (28.07)	94.86 (12.42)	-8.64***	90.11 (20.76)	-7.39***	83.22 (25.28)	-5.61***	77.77 (26.84)	-5.43***

Table 2 (cont.)

Outcomes on Marital Adjustment and Drinking and Use of Antabuse Contract for Alcoholics and Their Wives Who Received BMT Couples Group Only and for Those Who Received BMT Couples Group Plus Relapse Prevention

	Pre	Post	Pre-Post t^a	3mo Fup	Pre-3Fup t^a	6mo Fup	Pre-6mo t^a	12mo Fup	Pre-12mo t^a
				Per Cent Days Relapsed					
BMT plus RP									
M (SD)	53.24 (33.42)	1.64 (5.91)	5.09***	3.80 (9.58)	4.56***	1.42 (3.24)	5.88***	5.00 (7.22)	4.89***
BMT Only									
M (SD)	56.18 (34.53)	2.57 (8.40)	6.27***	5.08 (18.62)	5.76***	8.29 (18.06)	4.98***	11.47 (17.82)	5.10***
				Couple Behaviors Questionnaire Scale 1: Antabuse Contract					
BMT plus RP									
M (SD)	1.10 (1.51)	3.65 (1.49)	-4.61***	3.01 (2.36)	-2.31*	3.22 (1.75)	-5.27***	2.76 (1.92)	-2.73*
BMT Only									
M (SD)	1.53 (1.88)	4.15 (0.80)	-5.42***	1.63 (1.49)	-0.49	1.34 (1.39)	0.40	0.93 (0.97)	0.67

[a] Values of t-test given test whether scores at each follow-up period differ significantly from pretreatment scores.

[b] MAT scores presented are couples scores since husbands' and wives' scores did not differ and no interaction involving sex was significant for MAT.

*$p<.05$; **$p<.01$; ***$p<.001$

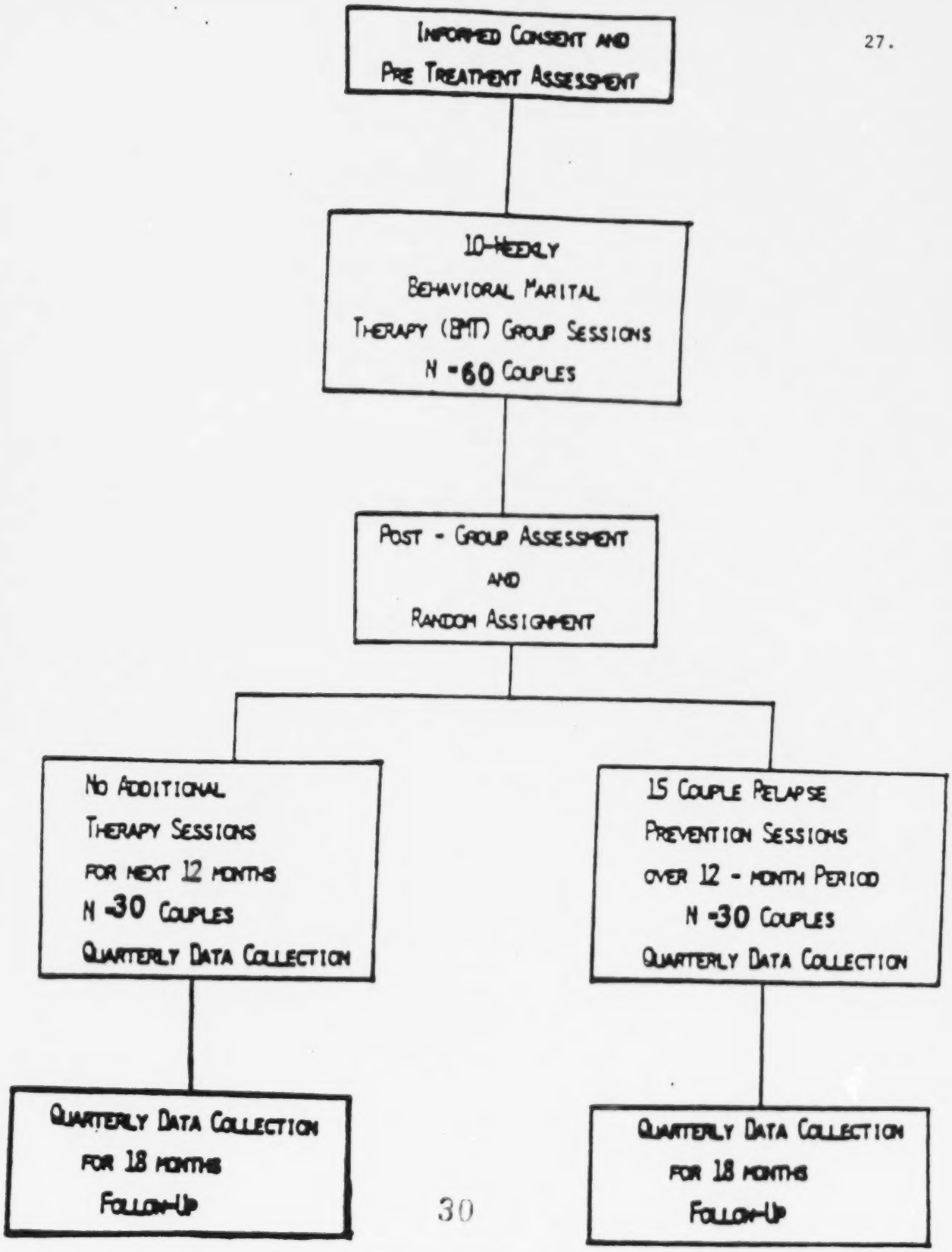

Figure 1. Design of Study on Couples Group Behavioral Marital Therapy (BMT) With and Without Additional Relapse Prevention (RP) Sessions

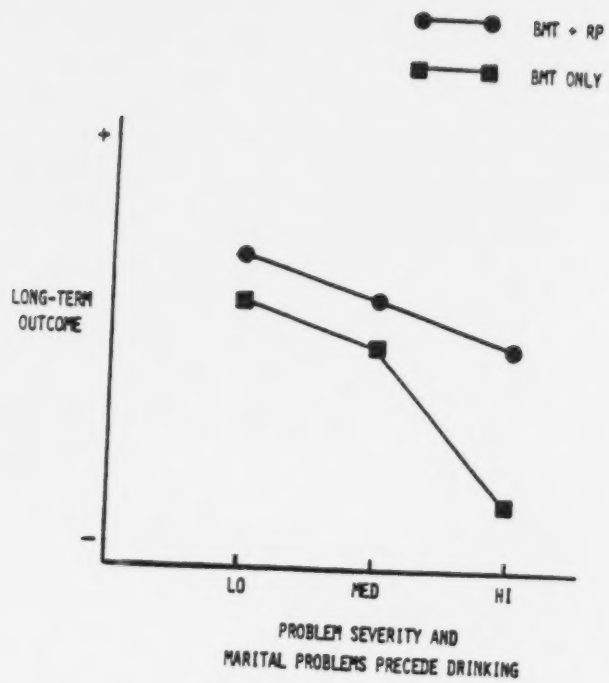

Figure 2. Form of Patient by Treatment Type Interaction Predicted in BMT and RP Study

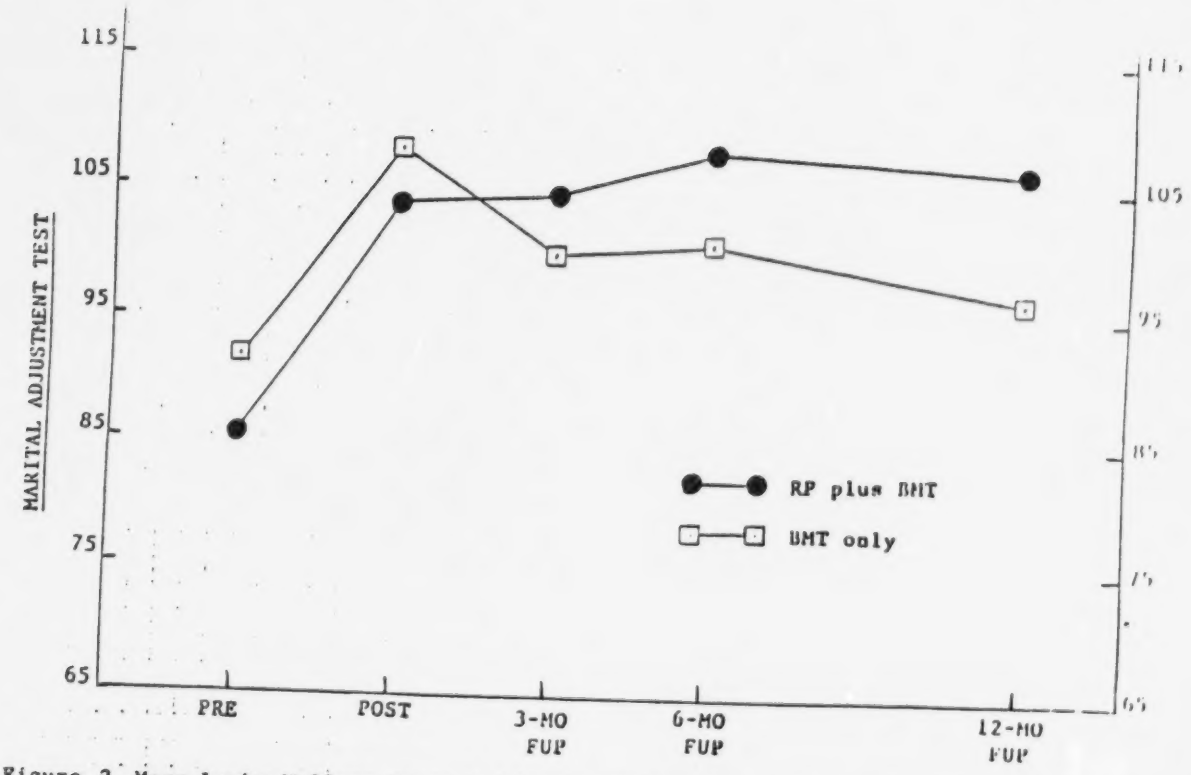

Figure 3. Mean Locke-Wallace Marital Adjustment Test Scores for Alcoholics and Their Wives Before, Immediately After, and at 3, 6, and 12 Months After a 10-Week BMT Couples Group for Couples Who Did and Did Not Receive Additional Relapse Prevention Sessions

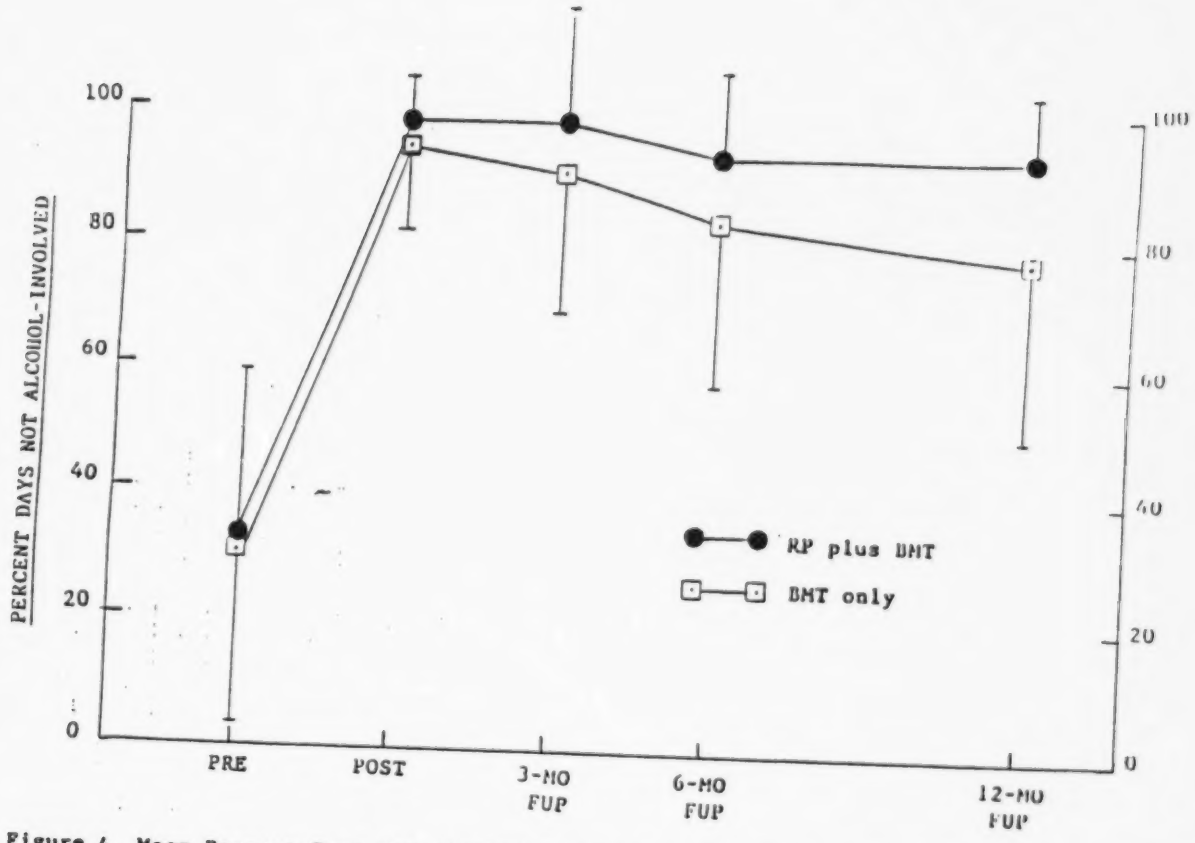

Figure 4. Mean Percent Days Not Alcohol-Involved in the Year Before (Pre), During (Post), and at 3, 6, and 12 Months After a 10-Week BMT Couples Group for Alcoholics Who Did and Did Not Receive Additional Relapse Prevention Sessions

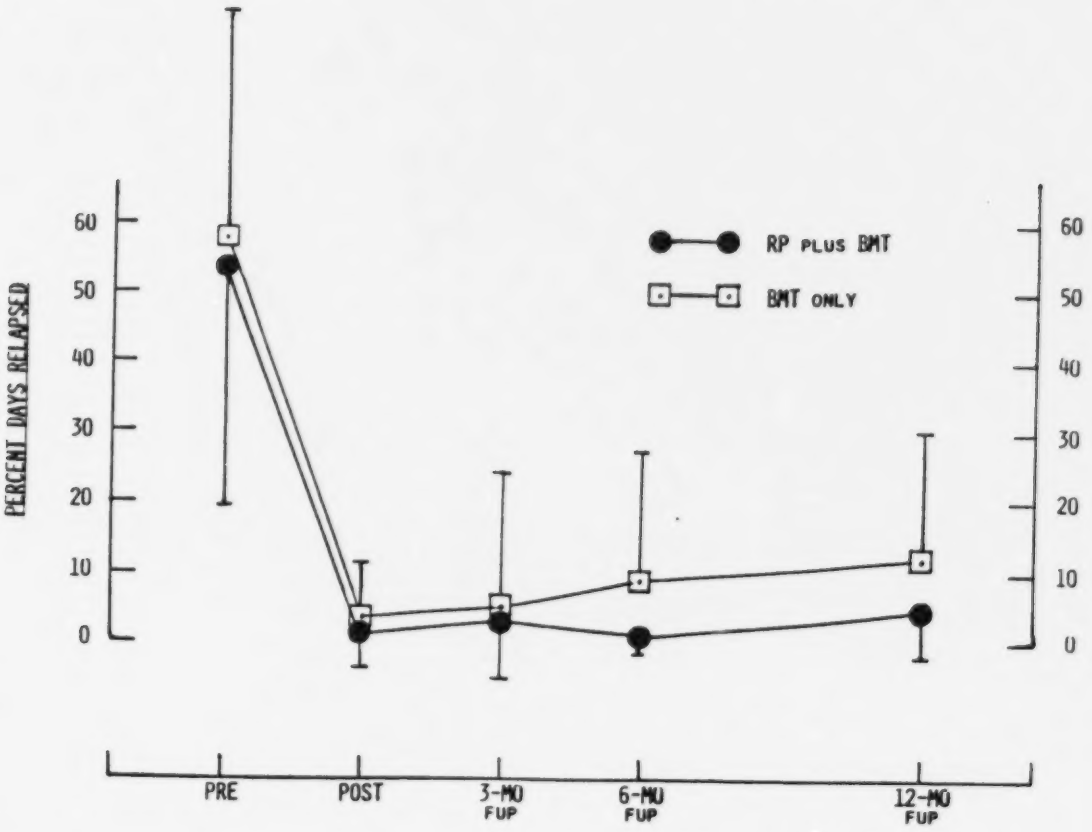

Figure 5. Mean Percent Days Relapsed in the Year Before (Pre), During (Post), and at 3, 6, and 12 Months After a 10-Week BMT Couples Group for Alcoholics Who Did and Did Not Receive Additional Relapse Prevention Sessions

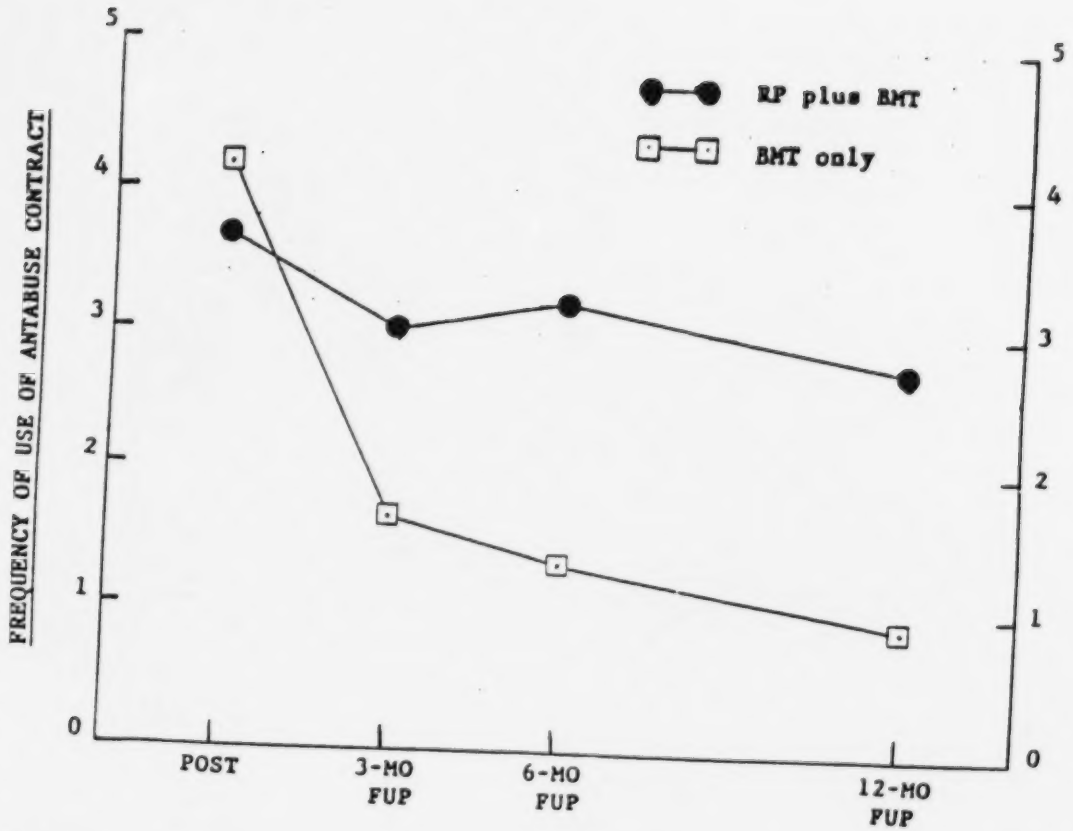

Figure 6. Mean Frequency of Use (0 = "not at all" to 5 = "all of the time") of Antabuse Contract During (Post) and at 3, 6, and 12 Months After a 10-Week BMT Couples Group for Couples Who Did and Did Not Receive Additional Relapse Prevention Sessions

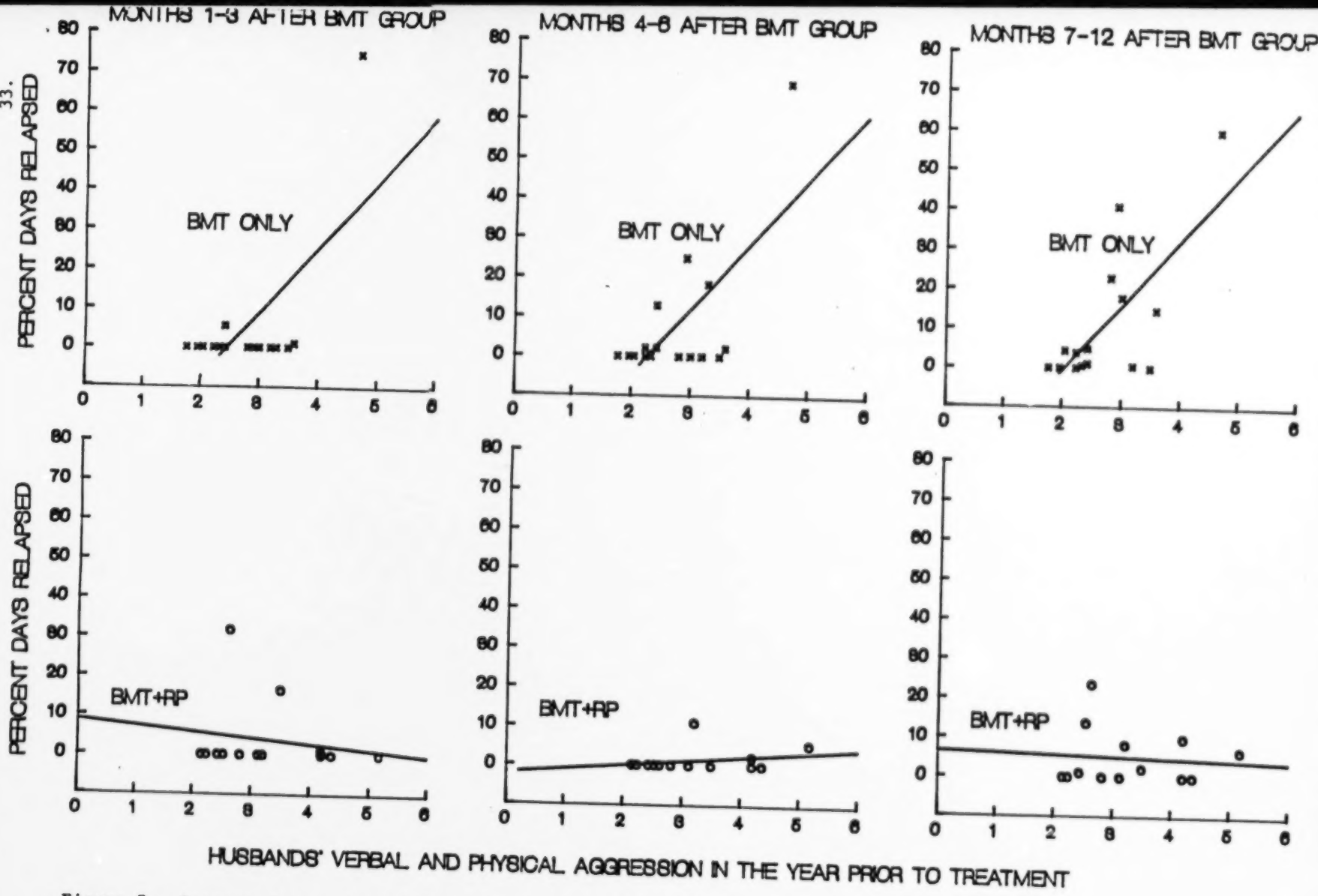
MONTHS 1-3 AFTER BMT GROUP
MONTHS 4-6 AFTER BMT GROUP
MONTHS 7-12 AFTER BMT GROUP
PERCENT DAYS RELAPSED
BMT ONLY
BMT+RP
HUSBANDS' VERBAL AND PHYSICAL AGGRESSION IN THE YEAR PRIOR TO TREATMENT

Figure 7. Percent days relapsed (days heavy drinking or in jail or hospital due to drinking) during the year after BMT couples group as a function of the extent of the alcoholics' verbal and physical aggression toward wife in the year prior to BMT for couples who did and did not receive additional relapse prevention (RP) sessions.

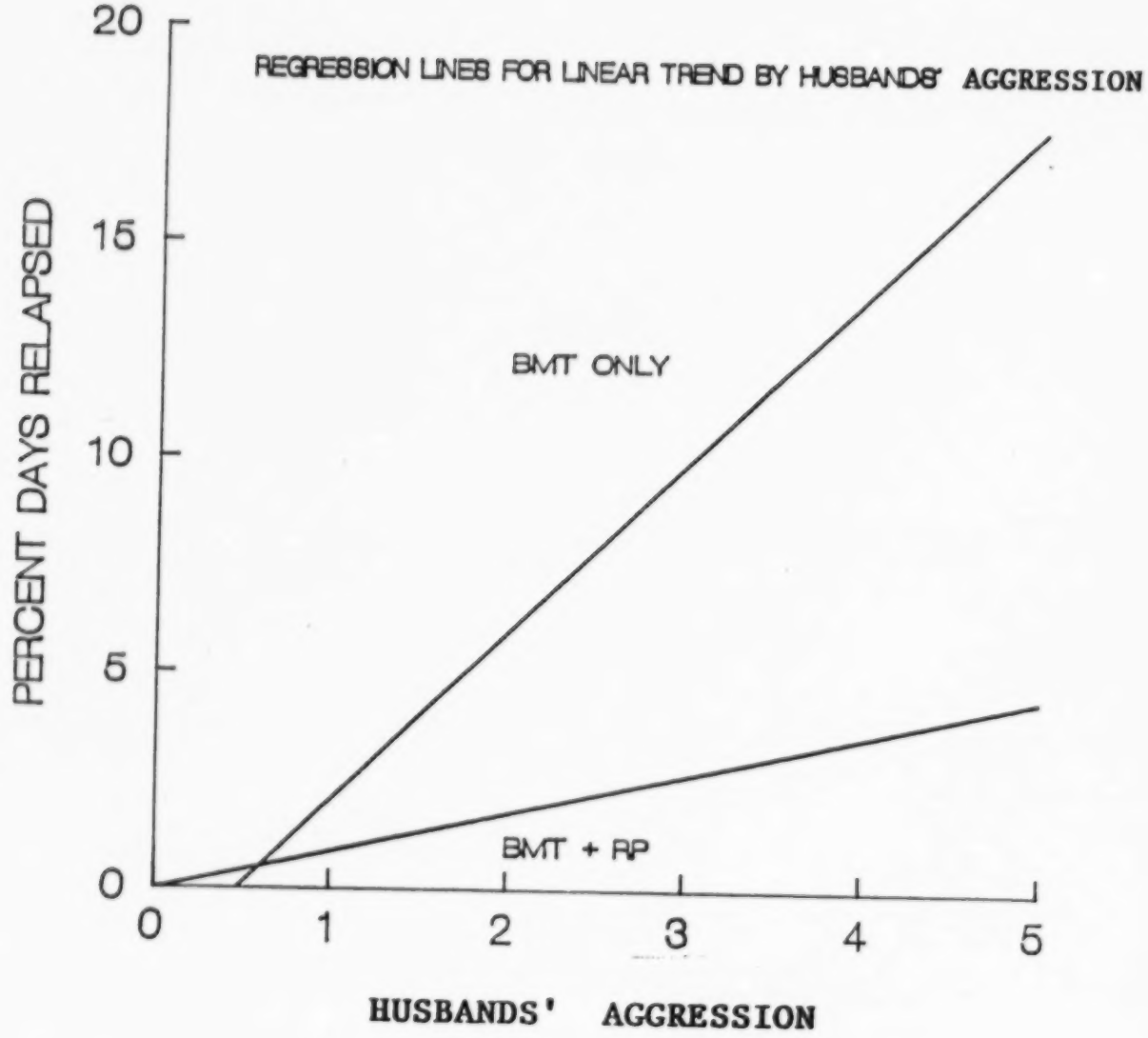

Figure 8. Linear trend in percent days relapsed (days heavy drinking or in jail or hospital due to drinking) over the year after BMT couples group as a function of the extent of the alcoholics' verbal and physical aggression toward wife in the year prior to BMT for couples who did and did not receive additional relapse prevention(RP) sessions.